

ABSTRACT OF THE DISCLOSURE

An improved fuel delivery system and fuel cell system is provided which includes a component, which delivers fuel from the fuel cartridge by connecting with a corresponding component in the anode chamber of the fuel cell. Liquid fuel is transported into the anode area via an action in which fuel is drawn through the material which may be substantially comprised of a foam-based substance. Gases, including carbon dioxide, that are produced in the anodic reaction can be removed because the foam is gas permeable. Electrons produced in the reaction are collected by a wire mesh that lies between the foam and the membrane electron assembly. The flow of fuel between the foam and the fuel cartridge and the foam and the anode can be interrupted by breaking the connection between the cartridge and the cell, or the cartridge can be pulled away from the fuel cell to break the connection between the foam components. The invention may be employed with a fuel cell stack, or with an enclosed, refillable fuel cell system. The cathode side of the fuel cell may also have a foam component to draw water away from the membrane electrode assembly while allowing oxygen to come in contact with the membrane.